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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Product Information



5-PAHSA-d₃₁ Item No. 17197

Formal Name: 5-(palmitoyloxy-2,2',3,3',4,4',5,5',6,6',7,7',8,8',9,9',10,10',11,11',12,12',13,13',14,14',15,15',16,16,16-d₃₁) octadecanoic acid

MF: C₃₄H₃₅D₃₁O₄

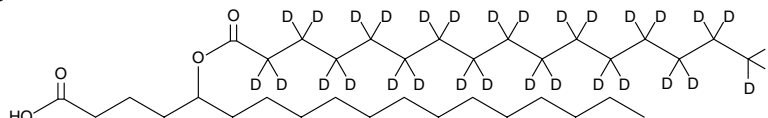
FW: 570.1

Chemical Purity: ≥95% 5-PAHSA

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃₁); ≤1% d₀

Stability: ≥1 year at -20°C

Supplied as: A solution in methyl acetate



Laboratory Procedures

5-PAHSA-d₃₁ contains 31 deuterium atoms at the 2, 2', 3, 3', 4, 4', 5, 5', 6, 6', 7, 7', 8, 8', 9, 9', 10, 10', 11, 11', 12, 12', 13, 13', 14, 14', 15, 15', 16, 16, and 16 positions. It is intended for use as an internal standard for the quantification of 5-PAHSA (Item No. 17043) by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 5-PAHSA-d₃₁ be stored as supplied at -20°C. It should be stable for at least one year.

5-PAHSA-d₃₁ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 5-PAHSA-d₃₁ in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

5-PAHSA-d₃₁ is used as an internal standard for the quantification of 5-PAHSA by stable isotope dilution MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled). *NOTE: Please be advised that this product will elute 3-5 minutes sooner than its corresponding non-deuterated standard when using the analytical method described by Yore, M.M. et al.*¹

Branched fatty acid esters of hydroxy fatty acids (FAHFAs) are newly identified endogenous lipids regulated by fasting and high-fat feeding and associated with insulin sensitivity.¹ 5-PAHSA is a FAHFA in which palmitic acid is esterified at the 5th carbon of hydroxy stearic acid. PAHSA isoforms are the most abundant forms of FAHFA identified in the adipose tissue of glucose tolerant AG4OX mice.¹ PAHSAs are synthesized *in vivo* in both mice and humans and are regulated by fasting and high-fat feeding in mice.¹ PAHSA levels correlate highly with insulin sensitivity and are reduced in adipose tissue and serum of insulin-resistant humans. PAHSA administration lowers ambient glycemia, improves glucose tolerance, and stimulates GLP-1 and insulin secretion in mice.¹

Reference

1. Yore, M.M., Syed, I., Moraes-Vieira, P.M., *et al.* Discovery of a class of endogenous mammalian lipids with anti-diabetic and anti-inflammatory effects. *Cell* **159**(2), 318-332 (2014).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/17197

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

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